

HISTORICAL PERSPECTIVE

Yellow Fever and the Emotional Consequences of Untreatable Epidemic Disease

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Yellow fever terrorized communities in tropical and urban settings during its height in the nineteenth-century American south. Carried by *Aedes aegypti* mosquitoes, which breed in stagnant water, the virus infects humans fervently and is most known for its symptoms of jaundice and vomito negro, a dark vomit of coagulated blood. During the near-annual outbreaks of yellow fever, caregivers struggled to cope with the emotional consequences

of failing medicine, sometimes leaving behind clues to their confusion in treating the disease and offering salient reflections on their inadequacies. The disease ravaged the Gulf region for decades. Records of the health workers' feelings of futility reflect their questions of what to do for others and what to do for themselves, offering a new perspective on yellow-fever scholarship and insight into contemporary clinical practice and research.

INTRODUCTION

Epidemic diseases often arise quickly, infect indiscriminately, and persist frustratingly. Once present, they can exist for years as untreatable medical and scientific quandaries. These threats to health may eventually be overcome, but only after years of scientific research, evolutionary advances in disease theory, successful experimental therapeutics, and effective distribution of curatives. The process is long and formidable.

As people progress toward the scientific understanding of diseases, particularly epidemic diseases such as yellow fever, which strike quickly and seasonally, they endure a period of confusion and trepidation before a resolution is found. Self-doubt, fear, and anxiety surface as mortality mounts. Evidence of these emotional reactions may be hidden under the guise of the emotional detachment demanded by the medical profession. Acknowledgments of medical, and sometimes personal, inadequacy remain concepts inferred from the words of social scientists and medical historians; scholars seem aware of these ideas, but they are seldom expanded upon or categorically defined.

Uncovering the hidden voices of workers in distress is a difficult task and requires significant good fortune on the part of the researcher. Stumbling across emotionally expansive letters or articles is not common when a researcher is scouring the early scientific literature and medical reports. But when such sources are discovered, salient remarks and pensive anecdotes can offer us a more complete understanding of an epidemic. Through close analysis, previously superficial knowledge about the emotional consequences of a disease takes on a new, more personal dimension, allowing a stronger connection between subject and observer. For the clinician or scientist today, such historical contemplation may help moderate the disappointment that can accompany attempts to combat disease. And such analyses of the past may help remove anxieties about failure; many people before us are shown to have failed on the way to success, thereby helping motivate innovative research unencumbered by apprehension.

Yellow fever has captivated social scientists for years, but the existing literature has not yet captured the sense of the disease's emotional consequences for workers who were on the front lines of disease control and treatment. The malady has inspired extensive scholarship by historians interested in the early public-health movements that arose because of the epidemic, the economic consequences of seasonal quarantines and the shutdown of city centers to limit the spread of the disease, and how it helped shape regional identities in warm-weather locations across the world (Humphreys, 1992; Bloom, 1993; Carrigan, 1994; Nuwer, 2009). I offer here a story with a different emphasis: the emotional consequences of an untreatable epidemic disease.

Sometimes known as "yellow Jack" or "bronze John," yellow fever terrorized communities in tropical and urban settings during its height. *Aedes aegypti* mosquitoes carry a virus that causes the disease; the mosquitoes breed in stagnant water, which was abundant in industrializing areas. A single bite transmits the virus to humans, initiating a gruesome infection. Hallmark symptoms include yellowing of the skin and eyes, known as jaundice, and expulsions of coagulated blood, or vomito negro ("black vomit" in Spanish). The details of transmission were unknown by observers of the disease in the 1800s; germ theory was still a novel idea, poorly received by the scientific community until the early nineteenth century. But the physical costs of the disease made it famous, as did its near-annual arrival in the summer months in cities such as Rio de Janeiro, Havana, New Orleans, and Memphis.

Throughout the American south, caregivers struggled to cope with their inability to treat yellow-fever patients. Unsuccessful treatments led to death, and successful ones were uncommon and inconsistent. One physician who experienced emotional turmoil in the face of widespread medical failure was Dr. William Armstrong, who worked for the Howard Association. His letters to his wife, whom he had urged to flee to Columbia, TN, during the epidemic, reveal

his frustration over the disappointing efforts he and his colleagues directed. His words, simultaneously depressed and determined, reflect his clear commitment to fight yellow Jack: "I feel sometimes as if my hands were crossed and tied and that I am good for nothing, death coming in upon the sick in spite of all that I can do" (Crosby, 2006, p. 74). Armstrong exemplified the thoughtfulness of those rare caregivers who have left behind a trail of personal letters and professional documents that describe their resolute but ineffective medical efforts.

Armstrong's feeling that his efforts were futile was characteristic of those felt by some caregivers in yellow-fever epidemics throughout the second half of the nineteenth century. Their concern was manifested on two levels: what to do for others, and what to do for themselves. The first level was characterized by the trial of different treatments, each with uncertain therapeutic value. The second reflects the sense of helplessness made up of fear, isolation, and loss of faith in cures. Together, these responses complicated the efforts of healers to treat yellow fever and further weakened an already fragile medical and regional community.

For today's physician, nurse, health worker, or scientist, the story of these century-old epidemics should offer solace to the overworked and inspiration to the distressed. Tales of pain, failure, and inadequacy are not new developments confined to the modern healthcare system; they are recurring themes for those faced with, and called on to prevent, disease and death.

THE QUESTION OF TREATMENT: WHAT TO DO FOR OTHERS

In 1879, a Kentucky physician by the name of J. P. Dromgoole published a long book cataloging the many opinions of physicians in response to the yellow-fever epidemic of the previous year. In 1878, according to one tally, twenty thousand lives were taken by the disease (Cirillo, 2010). Dromgoole's work, *Heroes, Honors, and Horrors*, is a collection of caregiver practices and contemplations, a comprehensive compilation of medical workers' experiences during the outbreak. The purpose of the book, according to its author's dedication, was to honor the "clergymen, physicians, and nurses who, in the hour of need, rushed to the relief of suffering fellow-men." It highlights articles and letters by, and biographies of, those heroes who strove to rid the United States of yellow fever. The work, through its assembled documents and contextual analysis, effectively captures the sense of uncertainty about the yellow-fever epidemic, and it reveals how healers focused on therapeutics rather than disease etiology during the yellow-fever outbreaks.

Southern scientists and physicians felt that the prevalence of disease was a consequence of the region's climate, germs, and Caribbean trade. The south seemed a particularly unlucky place in the nineteenth century. During the years from 1863 to 1883, roughly 6,500 New Orleans residents died of smallpox. In 1850, 47.5 out of 1,000 deaths in the United States resulted from malarial fevers, many of which occurred in the south; there, warm, wet summers helped

fuel mosquito reproduction (Hong, 2007). Yellow fever made the most impressive mark throughout the century with frequent but inconsistent large-scale epidemics resulting in 41,000 deaths in New Orleans alone from 1817 to 1900 (New Orleans Public Library, 2003). The prevalence of the disease and its death tolls prompted southern scientists to develop a regionally exclusive perspective on disease and treatment.

Constantly plagued by warm-temperature maladies such as yellow fever, physicians and scientists in the south had historically designated their region medically distinctive; they felt that regionally specific diseases required unique treatments. Medical distinctiveness, a concept created by southern physicians, claimed that regional factors such as climate, economics, and even racial demographics made the south a breeding ground for anomalous maladies (Leavitt & Numbers, 1978; Savitt & Young, 1988; Stowe, 2004). Dromgoole's *Heroes, Honors, and Horrors* addresses the "Tidal Wave of Death and Destruction," with "Historical Sketches of Each Afflicted Locality"; the first chapter discusses yellow-fever symptoms, treatments, and explanations.

Southern medical specialization started with southern medical education. Disease in the south demanded regional medicine, according to experts at the time, and that way of thinking shaped the minds of local physicians. No matter what opportunities existed elsewhere, students tended to seek education from local institutions. One student chose to study in Charleston because "we know better, here, how to manage Carolina constitutions than the Physicians of Philadelphia" (Warner, 1989, p. 193). Philadelphia was renowned for its medical centers; the city hosted the nation's first public hospital and medical school, making the College of Physicians in Philadelphia one of the most respected medical centers at the time. The outspoken student's father, also a physician, echoed his son's themes in a subsequent letter, claiming that climate, miasmatic exhalations, diet, dress, work habits, and social structure altered the symptoms of diseases and appropriate therapeutics in ways not understood by non-natives. Region-focused medical dogma drove practitioners to train in the south.

The expression of medical distinctiveness took several forms, one being an ongoing discourse between the south and the north about the validity of the concept itself. As southern scientists proclaimed themselves especially sensitive to the south's exceptional scientific needs, northerners argued to the contrary. Northern scientists and physicians used the recurrence of disease and high mortality rates from diseases such as the incessant and deadly yellow-fever outbreaks to bolster their claim that the south's undeveloped backwoods and dirty cities predisposed southerners to disease, making southern "experts" merely unwitting promoters of their own region's ill health. Those in the south responded passionately, claiming that the critics were unfamiliar with the dangers of southern maladies and therefore unfit to judge the southern plight.

Sure of his regional expertise and the inability of northern-

ers to survive the yellow-fever season in Tennessee, the president of the Memphis Board of Health turned away volunteers from the north in 1878, the deadliest epidemic year in the Mississippi Valley (Crosby, 2006). His primary motive, according to one commentator, was to limit the strain on the Memphis caregivers during an epidemic in which 17,000 of the city's citizens became infected; Memphis needed better help and fewer casualties, not an influx of unprepared and unspecialized physicians and nurses (Crosby, 2006). This example shows how those in the south existed in an environment of entrenched exceptionalist medicine and science, due in part to a south-north debate, and acted accordingly.

Others supported the notion of medical distinctiveness by actively recruiting local health workers during the epidemics. The Howard Association, a charitable organization founded by British philanthropist John Howard, implanted itself in the Gulf Coast region during its nineteenth-century battles with yellow Jack (Newsom, 1992). Besides sprouting infirmaries, hospitals, orphan asylums, and fund-raising efforts across the afflicted states, the Howard Association often helped promote regional health cooperation. In 1878, a year when Houston was not affected by yellow fever, a Howard nurse by the name of Kezia Payne DePelchin answered a call from Memphis for nurses. She proceeded to Tennessee to aid her fellow southerners and offer her medical expertise. Trained in the south and familiar with yellow fever through Houston's frequent bouts of the disease, nurse DePelchin embodied the kind of local proficiency preferred during yellow-fever epidemics.

Though they proclaimed themselves medically distinct, southern health workers lacked uniformity in their practice, often prescribing conflicting treatments in line with their personal experiences. In general, treatments fell into four categories: hydropathic, homeopathic, botanic, and orthodox. Hydropathy used water as an internal and external healing factor, applying large or small amounts as the situation suggested. Homeopathy focused on the natural ability of the human body to fight disease and employed diluted medicines to aid the process. Botany relied on herbs and plant-based concoctions for patient recovery. Orthodox medicine used drugs and substances such as quinine, calomel, teas, alcohol, opium, and bloodletting to alleviate the suffering of the sick (Humphreys, 1992; Bloom, 1993; Carrigan, 1994). Often, a practitioner's methods did not exclude any of these treatments. The therapeutics offered by medical workers ranged widely, as no treatment proved predictably superior to another. The blending of treatment techniques allowed for much experimentation, though variance in treatment failed to improve patient prognosis significantly.

A snapshot of the treatments used by caregivers in Dr. Dromgoole's *Heroes, Honors, and Horrors* reveals the diversity of the treatments given to patients. One physician described a "Creole treatment" he administered; the name saluted the French Louisiana region, and the treatment called for an eleven-step plan that included doses of castor oil, hot footbaths, sponge baths, injections of laudanum, watermelon-seed teas, cool cloths on the head of the

patient, chicken broth, and the directive that the patient not be allowed to sit up for a week (Dromgoole, 1879). Such treatments as this were common but, alarmingly, unique to each physician's clinical experience. Another doctor recommended a "calomel remedy," which combined footbaths and chicken or beef broth. One doctor recalled how he made a complete recovery from a bout of yellow fever by drinking ice water, bathing in ice, and resting (Dromgoole, 1879). Footbaths and broths were recurrent themes in treatment, despite their varied interpretation and application by physicians; no distinct and unanimously accepted treatment arose.

The Creole treatment, calomel remedy, and ice treatments were consistent in treating fever by using broths and baths as hydropathic remedies. However, other suggested solutions took entirely opposite stances. Mrs. Jane Swisshelm, a nurse, claimed that ice was detrimental to some patients and likely even accelerated death by reducing the patients' body temperatures too severely (Dromgoole, 1879). She argued that warm water opened the pores of the patients and drew out the poison of the fever contained inside the patients' bodies, allowing for timely and safe recovery. To support her claim, she referenced conversations she had with "prominent doctors in this country" and the case of a military officer who self-administered the warm-water treatment and overcame the malady (Dromgoole, 1879). Mrs. Swisshelm exemplifies a common trend among healers: their unshakable confidence in their own techniques. Her self-confidence, as well as the criticism she offered of different techniques, reflects the inconsistency in fever treatment and, by extension, the breadth of the yellow-fever problem. As confusion reigned, clashes within the medical community surfaced.

Professional healers were not the only group promising therapy. Lay healers commonly applied home remedies to loved ones, further complicating treatment. Like the professionals, these caregivers used a variety of techniques to treat yellow-fever patients, with enough success to give them a superficial confidence in their approaches. But these home remedies, too, were generally ineffective. Imagine, then, the frustration of locally trained caregivers using nearly every conceivable treatment to resolve the relentless outbreaks, but continuing to disappoint themselves and, more importantly, their patients. This frustration immersed the entire Gulf Coast region, linking distinct locales together in their struggle for reprieve.

Nurse DePelchin described Dr. Dromgoole's work as a nearly encyclopedic source for fever-treatment options. During her stay in the Mississippi Valley region, she wrote extensive letters to her sister. The letters continued after the end of the epidemic, and one dated March 1, 1879, directly validated *Heroes, Honors, and Horrors* as a compilation of approaches to fever treatment and its related disappointments. In her words, the book served as a "very good illustration of the various ideas that prevailed and which nearly all failed" (DePelchin, 1879). Seemingly prompted by the book, she offered a lengthy description of the varied treatments she had witnessed in her time as a Howard nurse for fever

patients at different points during the illness. DePelchin's invaluable letters give credence to Dr. Dromgoole's work as a respected summary of yellow-fever treatments and a catalogue of their ineffectiveness.

In sum, the wide variety and promised quality of individual fever remedies intensified the treatment question. As Dr. Dromgoole's book showed, little was agreed upon by scientists, and when agreement was reached, as on the use of water as a curative, the details remained highly disputed (e.g., the temperature of the water). So yellow fever thrived during this era of confusion for southern caregivers. Disappointment was the result, and it affected the caregivers in distinct ways.

FEAR, LOSS OF FAITH IN CURES, AND ISOLATION: WHAT TO DO FOR ONESELF

From the wreckage of the yellow-fever epidemics of the nineteenth century emerges a previously understudied notion of professional futility in yellow-fever medicine. Personal reflections and articles written by medical workers in response to their failures to remedy yellow fever suggest that a group of aware but helpless medical workers existed. Their reflections fall into three categories: fear, isolation, and loss of faith in prescribed treatments. The caregivers' contemplations show how the shared dilemma of yellow fever in the American south affected the entire medical community, despite notions of regional exceptionalism. And as some medical workers turned to religion for support, yellow fever appeared to be a malady uncontrollable by humans.

One of the most deadly yellow-fever epidemics to hit Galveston, TX, left behind a fearful story of physicians realizing and understanding their mortality. The year was 1867, and amid the climbing death tolls that eventually took nearly one of every four citizens of the port city, a doctor named George Taylor became one of the many who sacrificed his life for the benefit of others (Ratchford, 1945). In letters to his wife, whom he had left behind when he went to work in Galveston, fear pervaded his thoughts. The mundane nuances of his daily routine and sad longing for his wife were interspersed with recounted conversations with his peers that centered on trepidation about the onslaught of another fever season. Taylor notes how once-confident caregivers shrank under the realities of an underestimated epidemic: "Men who talked very loudly and fearlessly when they did not believe there was any [fever] here, are now frightened out of their wits" (Ratchford, 1945, p. 37). In Galveston that year, Dr. Taylor died alongside several companions in the fight against yellow fever. Mortality, described by a martyred doctor in 1867, raised the stakes of fever treatment and frightened otherwise confident medical workers.

The death of medical workers from bronze John was widely noted by historians and contemporary health workers. Of the three thousand Howard Association nurses in the 1878 fever epidemic, one third died. Of 111 Howard doctors, 54 contracted the fever and 33 died (Crosby, 2006). Dr. Dromgoole offers a three-page, four-column list of all the physicians, military personnel, and ministers who died

serving fever patients in 1878 across the nation, a list to which DePelchin added another five with whom she had direct contact (DePelchin, 1879). The sheer magnitude of the caregiver mortality described by these sources, totaling approximately 350 in 1878, illuminates the cost of failed treatment paid by all people in the region, regardless of medical training.

As caregivers faced death in their work environment, the recognition of their inadequacies as healers of both patient and peer became more pronounced. Nurse DePelchin experienced persistent feelings of inadequacy as she aided physicians in the fight against yellow fever. In letters written to her sister, references to these sentiments abound. In one letter, she described the difficulty of her work and the emptiness she felt when failing to save a dying patient. Addressing her attending physician, she asked, "What makes me so unlucky?" He replied appropriately, considering the glum realities of caregiver success rates for ill patients, saying, "This fever baffles and staggers the wisest" (DePelchin, 1878). The daily mortality faced by caregivers pushed them beyond the science they understood and the treatments they administered. They exhibited a loss of faith in the existing, and often conflicting, treatments.

Some caregivers addressed their inadequacy directly. Prominent New Orleans physician Joseph Jones criticized reliance on the unconfirmed techniques of yellow-fever prevention by arguing that others had simply not admitted the truth of the limitations on medical knowledge about the fever. Reaching his breaking point, Jones declared, "I am thoroughly convinced that we have discovered no antidote or abortive treatment for the disease, and since, I have abandoned the use of powerful remedies" (Jones, 1879, 651). By abandoning the standard remedies and acknowledging the lack of antidote for yellow fever, Jones boldly suggested his distrust of his own medical efforts to eliminate the disease. He was not the only one to do so. A Little Rock physician similarly proclaimed his distaste for existing remedies and professed, "I have learned a great deal about the fever since it broke out here, and have found that in every case patients do better without medicine" (Dromgoole, 1879, p. 51). Physicians who publicly disowned available fever therapies represent an important faction of caregivers who refused available methods, finding them unreliable. Their lack of faith in existing remedies went hand in hand with the fear caused by unyielding seasonal bouts of the malady and the realities of patient and caregiver mortality.

While some lamented their failures in personal reflections, others instead opted to risk their lives to find a cure by self-medication and infection. These individuals performed experiments they believed to be beneficial to the medical community and sought to uncover the causative factors of the disease and better understand its operation. Their audacity reflects their loss of faith in existing remedies. Two instances of self-experimentation come from the notes of New Orleans physicians James Carroll and Alcée Chastant. According to Carroll, one medical student in Pennsylvania, perhaps eager to resolve a disease southerners could not,

experimented on himself by placing fresh black vomit and blood serum obtained from yellow-fever patients into wounds made in his arms and legs. The student also inhaled the fumes from black vomit and made black vomit into pills and swallowed them (Carroll, 1905). In Chastant's case, a fellow physician also applied black vomit to the surface of a cut made on his arm, swallowed a quantity of the substance, inhaled fumes obtained by evaporation of the matter, and inserted some into his eyes. Such self-experimentation, however laudable, further identifies yellow-fever caregivers as a group desperate for a cure. Though the experimenters' precise motivations are not clear, the grim realities of mortality and unsuccessful treatments likely played a role.

Faithlessness in existing caregiver remedies opened discussion of yellow fever as self-limiting, a concept that signaled personal defeat for scientists and healers amid continuing patient deaths. Dr. Samuel Choppin of New Orleans once admitted that no limits placed on the disease by humans could prevent the disease's transmission or course. Arguing that the medical community could do nothing to reduce the impact of the disease, Choppin said, "We are at a loss to know how to check the ravages of the fever when it attacks the human body" (Dromgoole, 1879, p. 71). Pessimism from lost faith pervaded the minds of prominent physicians such as Choppin in their efforts to check the onslaught of the disease. Remarking how little done by caregivers improved the likelihood of survival, DePelchin once compared the unchecked rampage of yellow fever to that of a tornado sweeping through a beautiful town (DePelchin, 1878). A fine comparison, the image of a tornado ravaging the town aptly evokes the unbridled and uncontrollable havoc caused by yellow Jack. For medical workers during the summer months, resolving the yellow-fever dilemma in the south may have appeared as fruitless an endeavor as attempting to stop a tornado.

In the late nineteenth century, caregiver isolation was not fueled solely by failed medical experiments and remedies. The realities of patient care and the likelihood of death for these caregivers increased their loneliness. Although a plethora of forums existed in which they could discuss general understandings, treatments, and yellow-fever policies, medical workers suffered from solitude as their work created—and demanded—emotional detachment. Few answered the call to tackle the dilemma on the front lines. Those who did witnessed unchecked disease fatality. For the caregivers in this setting, failure left them psychologically vulnerable to solitude from detachment and physically vulnerable as their peers perished. This isolation fueled, in some caregivers, a reliance on religion, with God being the only reliable source of comfort.

Understanding the caregivers' isolation starts with understanding the level of exertion their work demanded. Forced in some cases to see more than one hundred patients a day, doctors in the plagued city centers frequently surpassed their requisite duties to ease the suffering of the populace. Others simply heard begging and pleading from the ill as the doctors passed from house to house but were forced

to continue onward, answering awaiting appointments for house calls. Spending several nights in a row without sleeping or eating affected the minds of the patients as well as of the bedside caregivers; as the illness set in, it caused irritability and restlessness, a combination that could make patients turn maniacal and demand much attention, refusing caregivers any respite (Crosby, 2006).

Working in understaffed conditions and personally overextended, yellow-fever caregivers suffered from widespread physical and mental dilapidation, which enhanced their emotional fragility. Forced sometimes to bury their own patients due to poor funding and high mortality, particularly in smaller towns, some caregivers developed a sense of callousness. The nurse Kezia DePelchin described the experience of having to bury several children in Senatobia, MS, as one from which she initially demurred, but to which she eventually became desensitized (DePelchin, 1878). In this case, detachment from compassion in the face of death, particularly for a very emotionally aware woman such as DePelchin (as evidenced in her insightful letters to her sister), proves the detrimental effect of failed efforts to save patients. Futility caused her continuous emotional strain and altered her perspective on the dying. The work, damaging and unrelenting, siloed DePelchin into a world of complex emotions where endless strain fueled an opposite, but requisite, detachment.

On a cool winter night in Memphis, Dr. William Armstrong foresaw the end of the 1878 fever season and reflected on the loss of colleagues by commenting on his solitude. "My heart abounds with joy," he wrote, "at the mere hope that this cool night will possibly end our labors. . . . I alone am standing" (Crosby, 2006, p. 82). The words of Dr. Armstrong speak to the impact of the work demands and the emotional drain on healers in the American south. What remained for a physician or nurse or minister who sacrificed so much over several months, only to see patients, friends, and coworkers perish? The respite of the fever's end calmed Dr. Armstrong and others, but at what personal cost? He had survived the fever (he was infected, but overcame the malady), served others (many of whom did not survive), and abandoned his family (left in the countryside of Tennessee) to treat a disease that, in the end, he was no better off at managing than at the onset. Despondent and broken, faced with personal and professional futility, and surrounded by beneficent societies, some caregivers turned to religion for emotional security and reassurance.

In the nineteenth-century American south, Christianity was dominant. When faced with professional and personal strain as a result of epidemic yellow-fever outbreaks, some caregivers looked to religion for emotional support. In many cases, Christian fellowships and covenants led the push for patient care. In New Orleans, the Sisters of Charity, the Sisters of the Holy Family, and later, the Italian Sisters of the Sacred Heart worked to secure funding and care for the suffering (Carrigan, 1994). In Memphis, St. Mary's Cathedral functioned as an orphanage for children with sick or deceased parents (Crosby, 2006).

DePelchin left behind a clear trail connecting medical futility to religion in the yellow-fever epidemics of the nineteenth century. One for artful descriptions of her thoughts, DePelchin relayed important trends for Christian caregivers at the time. In October 1878, for instance, she wrote to her sister wondering if God heard her when she prayed. Saying “I have prayed more than in all my life put together,” DePelchin exhibited a reliance on religion during her stay as a Howard nurse (DePelchin, 1878). Many embraced connections between science and religion, as ministers believed scientific discoveries would confirm the dogmas of Christianity. As one historian put it, “Few people in the South outside the ranks of physicians and scientists could have exhibited greater enthusiasm for natural science than did the southern clergy” (Holifield, 1989, 127). As science failed her and her patience disappeared, DePelchin turned wholeheartedly to Christianity. Religious faith, for DePelchin and others, provided a break from the inadequacies of medical practice during epidemics.

The inclusion of several sermons delivered in fever locales during the 1878 epidemic in Dromgoole’s *Heroes, Honors, and Horrors* affirms the role played by religion for fever healers and patients alike. One such sermon, given in Louisville by the Reverend H. C. Morrison, begged the members of the congregation to consider the faith they put in science, stating that science had become a form of idolatry for those (both caregivers and the ill) awaiting the arrival of the season’s first frost to free them from the epidemic. To show the faults of fever sufferers’ idolatry, Morrison cited the prophet of God who prayed for water and received it, despite nearly four years of “brassy heavens” and ignoring the “natural indications” of continued drought. “And yet we pray,” he argued, “and the elements are not changed, and why? He [the prophet] had faith, while we have not” (Dromgoole, 1879, p. 55). Using the metaphor to make his point, Morrison encouraged the listeners to put less faith in science and more in religion. This sentiment echoed the reflections of DePelchin and certain other caregivers suffering from emotional distress. Trust religion, not science, these Christians argued, when faced with an affronting and uninhibited disease.

CONCLUSION

Religion may have offered caregivers a sense of reprieve from their scientific blunders, but in the end, the effect of yellow fever was more exact than could be determined by theories, experimentation, or religious faith. DePelchin made clear the lasting effect of the 1878 epidemic and the internal struggles that followed. After the outbreak had passed, she wrote, “still the remembrance of the awful scenes of the great epidemic have cast a shadow on my heart that will never pass away” (DePelchin, 1878). Faced with daily instances of failure and doubt, caregivers were unable to escape the reverberating emotional damage caused by the epidemic. Regardless of the methods undertaken for examining the disease’s transmission, proper treatment, or eventual end, those who experienced its wrath suffered from a distinct sense of helplessness in dealing with the malady and its toll. Fear, loss of faith in remedies, isolation, and reliance on religion characterize the emotional consequences for caregivers unable to stop the disease’s wrath. These themes may echo the experiences of clinicians, researchers, and caregivers in today’s healthcare community, particularly in the context of unyielding, unexpected, and untreatable disease.

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